

Mines student works on sampling efficiency

Michael Holzmeister
Staff Writer

This last Friday, Ashlyn Munson presented her work at the first spring semester Mathematical and Computer Sciences Colloquium of the spring semester on January 16. Munson's paper, *Efficient Sampling in Case-Control Studies*, explains how her sampling method can reduce costs and improve the precision of estimates when compared to other statistical methods. This new method has been proven more efficient than simple random sampling.

"Previous studies have utilized simple random sampling and counter-matching to create the sample risk set," Munson writes in her abstract. "Our research suggests that a more efficient sampling method exists, one which minimizes the variance of the risk estimate."

Munson examined data from a study of 3,347 miners who worked on the Colorado Plateau. The study concerned itself with the incidence of lung cancer among the miners. Munson explained that she categorized the members of a given sample set by time spent working in a mine and by age. These sets would contain a fraction of the total and each member would share several common factors.

"What we've designed allows us to sample one person," Munson said. "That's the whole idea." When a member of a set dies, or "fails" in the statistical vocabulary, that person becomes the focus of study. The control is anyone in the same set still alive. This method relieves statisticians of the need to survey an entire group.

A statistician can easily discover whether the failure had any factors other than mining, like smoking. If simple random sampling were used, the statistician would have been forced to survey everyone in the sample. Even if the sample size equals just one, this new method appears to work.

"Simulations indicate that this probability distribution is efficient for situations where exposures are not precisely known, and when confounder data is collected in addition to exposure levels," states Munson's abstract.

Munson expects to complete her PhD this spring. She earned her undergraduate degree in mathematics from the University of Colorado at Boulder and a Master's degree at Mines. The Math Department holds colloquia every Friday at 3 PM in Chauvenet 143. Next week's colloquium features Clothilde Melot, who will present her *Study of a Model for Fractal Boundaries: the Takagi function*.

Sandbox modeling at CESEP

Jake Rezac
Content Manager

In 2006, media outlets such as The Associated Press and The Science Daily News reported that Sri Lankan water supplies were still suffering effects of the 2004 so-called Boxing Day tsunami. The reports cited extensively a journal article titled *Impacts of the 2004 Tsunami on Groundwater Resources in Sri Lanka*. This article was co-authored by Mines Environmental and Civil Engineering professor, Tissa Illangasekare. Illangasekare, who is Sri Lankan by birth, discovered that much of the groundwater in the areas hardest hit by the Tsunami was still contaminated and unhealthy. Although this was important research, it merely scrapes the surface of the research in which Illangasekare specializes. He highlighted this research last Friday as part of the Colorado School of Mines Academy lecture series titled "Playing in Sand Boxes and Snow to Understand a Little more about Environment, Global Change, Seal Level Rise, and Tsunamis."

Illangasekare, who is director of the Center of Experimental Study of Subsurface Environmental Processes (CESEP) and studies groundwater contamination, began his lecture by examining the problem of dirty water. "Clear water is critical for a healthy and sustainable society, and ensuring its availability presents a major challenge in Colorado, the US, and the world." He added by pointing out that "ninety-five percent of the freshwater on Earth is

groundwater... 1.5 billion people rely on groundwater."

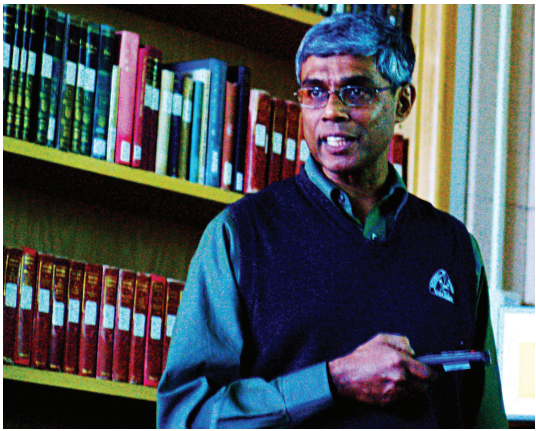
Stressing the importance of groundwater, Illangasekare revealed why he studies groundwater contamination. "The estimated cost for clean-up [of contaminated groundwater] is \$480 billion – \$1 trillion." The reason for these extreme costs involves physical processes which make removing contaminants from soil and groundwater almost impossible. "Our problem is what to do when [oil and contaminants] get stuck in the soil. You find this problem all over the world - chemicals stuck in the soil and contaminating the water," Illangasekare explained. "You go to a site contaminated 30 or 40 years ago and the problem is still there."

In order to solve the problems presented by groundwater contamination, Illangasekare and his team work with miniature models of groundwater contamination and write mathematical equations to go along with the results of the experiments. The ex-

periments they perform involve putting contaminants into giant sandboxes, and watching how the contaminants move through the sand. Using this method is beneficial, according to Illangasekare. "We can do various things with initial conditions and finding data. We can do things you

can't do in the field." He further stressed the importance of experimenting by pointing to something he learned before he did experiments. "We solve partial differential equations, but there may be situations where people write the equations and don't know if they're solving the problems. That's why we have the sandbox." Experimenting in the way they do has highlighted how difficult the problem of groundwater contamination is. "At the center, we show the complexity... of the problem." Due to the complexity of the problem, Illangasekare has found that in some cases, data from the field is very different from data in the lab. It is for this reason that CESEP is expanding their research. For example, they have been given access to part of the pool in the old gym to construct a very large sandbox in which to do experiments.

Illangasekare ended his lecture by talking about other things CESEP researches. These range from wireless sensor networks to model calibration to examining the impact of evaporation at the Earth's surface on global air circulation models.



PATRICK BESEDA / OREDIGGER

Physics Colloquium: Dr. Mauricio Terrones and carbon nanotubes

Tim Weilert
Content Manager

Throughout his years of research and study, Dr. Mauricio Terrones has accomplished more than most would dream of doing. Terrones, who carries multiple degrees and academic honors, has worked with Nobel Prize winners and authored a sizeable amount of scientific publications, came to Mines last week as part of the first Physics Colloquium of 2009.

The presentation covered research from the last ten years conducted by Terrones and his associates at Laboratorio de Investigaciones en Nanociencias y Nanotecnologia (LINAN). Specifically, the importance of defects in carbon nanotubes and the need for further research were discussed.

Defects in carbon nanotubes were divided into four main areas

of interest: structural, topological, substitutions, and vacancies. With every area, Terrones stressed the importance for further research to quantify how defects are classified and standardized.

According to Terrones, structural defects occur when pentagons and heptagons are introduced to the standard hexagonal carbon nanotube structure. Small changes within the structure can have effects on how the nanotube behaves. "The electronic properties [of the nanotube] change from metallic properties to semi-conducting," said Terrones. "It behaves like a switch when you have one pentagon and one heptagon [in the structure]."

When discussing topological defects, Terrones highlighted the

shift in opinion of the scientific community. During the mid-1990's, all defects were seen as bad, until the late-1990's, when Terrones began to see the importance of such defects. According to Terrones,

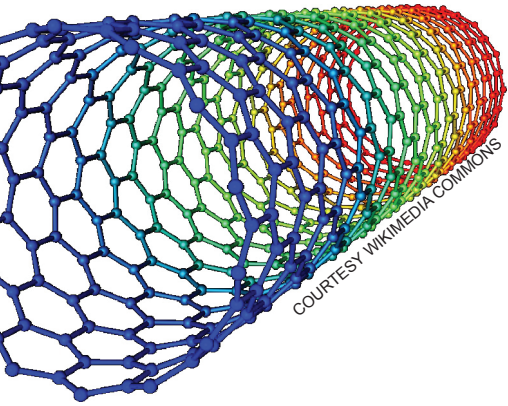
"The idea is to remove atoms and create a vacancy. These reconstruct into a new structure, and it shrinks the tube. We noted that after electron radiation, and removing carbon atoms from the tube, a metal placed in the tube began to compress. Using this method we achieved pressures up to 40 gigapascals."

Vacancies in nano-

tubes could also be used to connect tubes and create networks of tubes which could act as electron transport paths.

Terrones spent the rest of his presentation outlining the specific research he has conducted with carbon-nitrogen (CN_x) nanotubes and their applications. Such nanotubes could be used as anchors

for silver and platinum atoms, protein immobilizers, and as



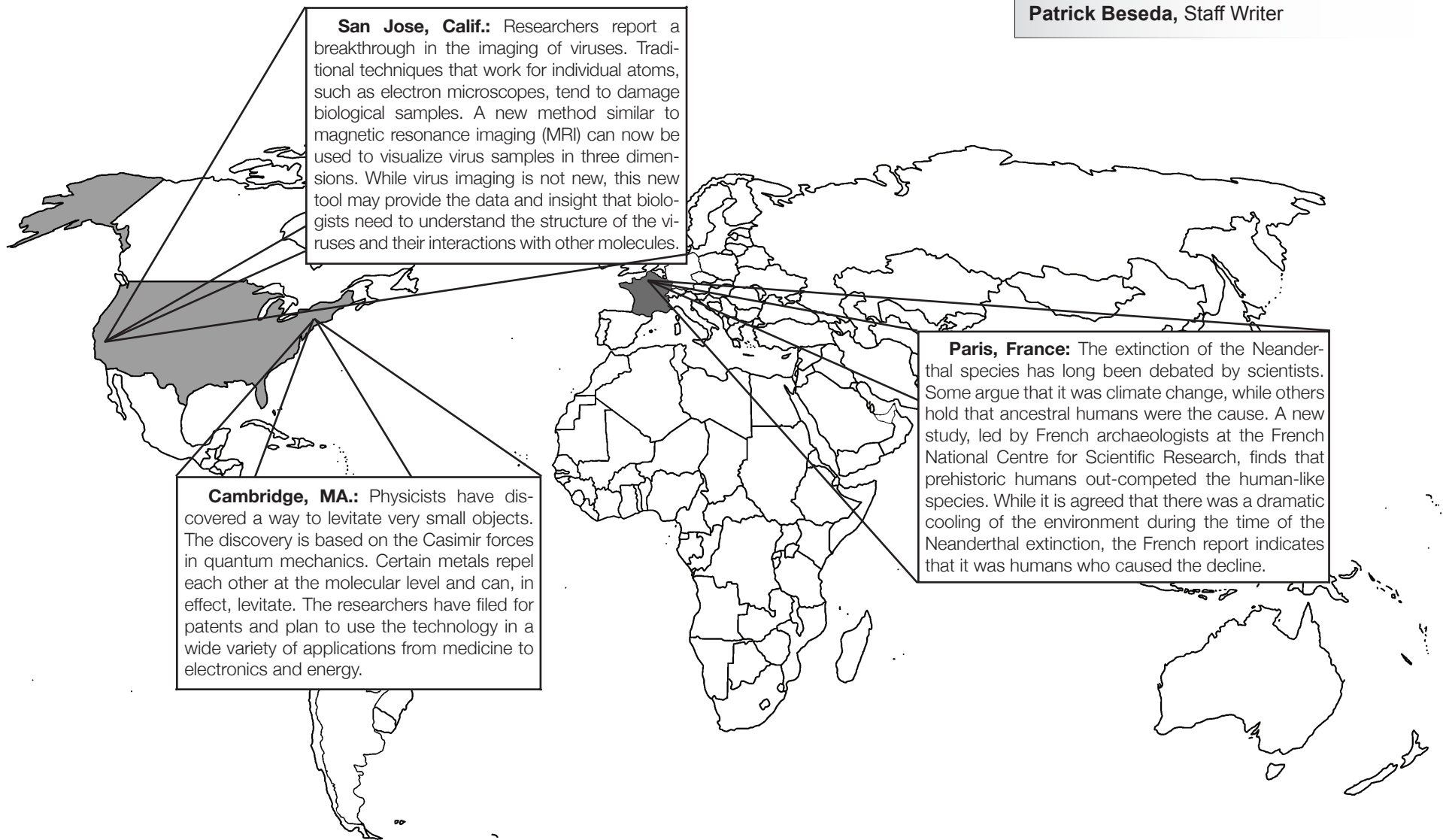
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sensors for toxic and reactive gasses. Furthermore, CN_x nanotubes could be used in epoxy composites, polymer bottles and in new types of rubber capable of withstanding 260° C and 235 MPa.

As he closed, Terrones stressed the importance for safety and standards concerning carbon nanotubes and the need for further quantification of defects.

Scientific discoveries this week

Patrick Beseda, Staff Writer



San Jose, Calif.: Researchers report a breakthrough in the imaging of viruses. Traditional techniques that work for individual atoms, such as electron microscopes, tend to damage biological samples. A new method similar to magnetic resonance imaging (MRI) can now be used to visualize virus samples in three dimensions. While virus imaging is not new, this new tool may provide the data and insight that biologists need to understand the structure of the viruses and their interactions with other molecules.

Cambridge, MA.: Physicists have discovered a way to levitate very small objects. The discovery is based on the Casimir forces in quantum mechanics. Certain metals repel each other at the molecular level and can, in effect, levitate. The researchers have filed for patents and plan to use the technology in a wide variety of applications from medicine to electronics and energy.

Paris, France: The extinction of the Neanderthal species has long been debated by scientists. Some argue that it was climate change, while others hold that ancestral humans were the cause. A new study, led by French archaeologists at the French National Centre for Scientific Research, finds that prehistoric humans out-competed the human-like species. While it is agreed that there was a dramatic cooling of the environment during the time of the Neanderthal extinction, the French report indicates that it was humans who caused the decline.

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Headlines from around the world

Emily Trudell, Staff Writer

President Bush gave his farewell speech on Thursday. He cited changes in the United States after the 9/11 attacks and defended his decisions during his time in office as President of the United States.

Bear Grylls, host of the Discovery Channel's **"Man vs. Wild,"** and his wife Shana celebrated the birth of their third child, a baby boy named Huckleberry Edward Jocelyne Grylls.

The **United States** and **Canada** are still facing a severe **cold spell**, with temperatures in Minnesota 48 degrees below zero, negative seven degrees in Chicago, and 45 degrees below zero in Fairbanks Alaska.

US Airways flight 1549 crashed in the Hudson River less than three minutes after the plane took off from **LaGuardia Airport** in New York after being hit in both engines by birds. The crash is still under investigation.

Washington D.C. prepared for the **presidential inauguration** of Barack Obama by spending approximately **3.5 million dollars** on seating, fencing, and the stage. 240,000 tickets have been issued for the January 20 event.

Israeli Prime Minister **Ehud Olmert** declared a unilateral ceasefire in the **Gaza Strip** beginning Sunday at two in the morning, though Palestinian officials argue that the ceasefire cannot stand unless the Israelis leave Gaza.

Downadup, a new sleeper virus, has spread to nine million computers in Europe, the Americas, and Asia, exploiting a bug in Microsoft's **Windows** software. The bug could allow for a hacker

to gain access to entire computer networks.

A man **accidentally shot** and killed his six-year-old niece during her visit to his home Friday. The shot occurred while the man was reportedly disarming his .45 caliber handgun in Spartanburg, South Carolina, in order to make his home safer for his niece's stay.

A team of twenty doctors and nurses in Phoenix, Arizona successfully separated a pair of **conjoined twins** who were connected from below their sternums in a 12 hour surgery on Thursday. Doctors in Oklahoma City also prepared for a surgery to separate a pair of

c o n -

joined twins, setting the surgery date for Monday.

Piracy off the coast of Somalia was reported to have increased 200 percent in 2008 over the previous year, making **Somalia** the worst area in the world for piracy. Forty two of the 49 naval hijackings were in the area of Somalia in 2008.

A suicide bomb outside of the German Embassy in **Kabul, Afghanistan** killed five people, in-

cluding one American. Several other Americans and Germans were injured in the blast.

Three Red Cross workers who were kidnapped in the southern **Philippines** were able to make contact with an aid group. The missing workers said they are unharmed, but are still held captive.

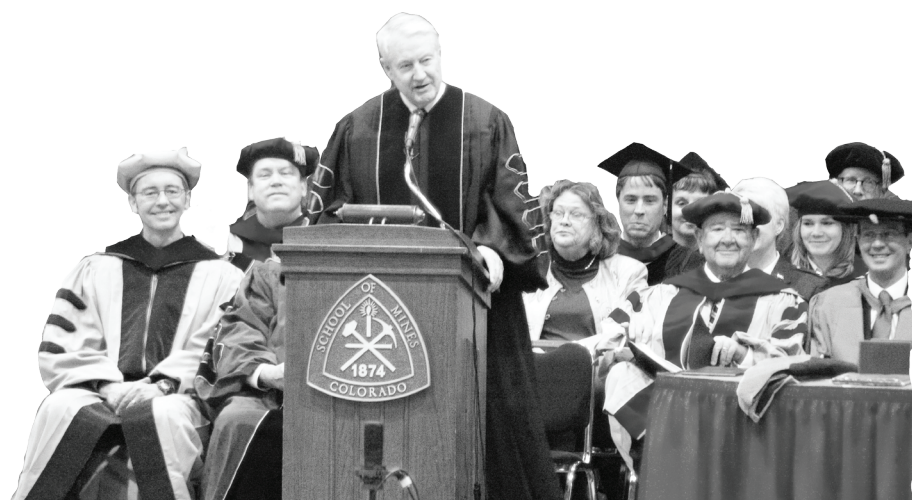
The United States Air Force made two flights to **Darfur**, Sudan, carrying vehicles, water purifiers, tents, and water tanks to peacekeepers in the area.



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Geek of the Week

Benjamin Johnson
Staff Writer

[Oredigger] Do you consider yourself a geek?

[Mack] It depends on what you mean by geek. I'm pretty passionate about things, but I would consider myself a geek only in certain areas, or maybe a nerd.

Do you think others consider you a geek?

I have been called a choir nerd a lot. I get made fun of a lot for the amount of reading I do. But outside of that I don't think anything one thinks I am. Is that good, am I doing okay?

Do you have any strange talents?

Wait, does stalking people count as being a geek? People just call me strange, but I guess my arms bend funny and I am kinda double-jointed. Mostly I am just talented at creeping people out.

What is the geekiest thing

you own?

I own two t-shirts from a Barber Shop camp; it's called Summer Harmony Camp.

What is Barber Shop?

It's like a group of four parts, sung a *cappella*. Boy groups are called Barber Shops; girl groups are called Sweet Adelines.

What is your favorite a cappella group?

They are not necessarily an a *cappella* group but they do a *cappella* songs - Celtic Women.

What is the geekiest thing you have done in college?

Recently, I have read a lot of books on neurology just for fun so I would say that that is probably pretty geeky.

What made you choose Mines?

[Laughs] I was online filling out scholarship applications and I saw the Golden Scholar Admission

...Jenny Mack, Junior: Biochemical Engineering

thinking it was a scholarship for golden scholars, not realizing I had applied to Mines, and here I am.

What class is your favorite and why?

I liked NHV because we got to analyze poetry and look into ethics and I really enjoyed analyzing social interactions.

What do you plan on doing after college?

I am thinking that I might go to seminary and then my ultimate goal would be to go to other countries and help them in any way I can. I really like traveling, and that's why.

Do you have any hobbies?

I am a geek over foosball; I forgot to tell you that. I am in the foosball championships for the second year. I am also in an a *cappella* group called Miner Tones; I play the piano and do rock climbing/bouldering. Sometimes I clean things for fun.

Why do you like foosball so much?

So, I first hated the game, but every day after physics I would just be so pissed that I would get my aggression out by playing foosball and now I love it.

If you were stuck on a deserted, barren island and could have three items, what would they be?

I would probably bring some soy products because I love soy, I would probably run around naked so I would not need any clothes. I would probably bring some good books for entertainment and I would definitely bring my dog. I think I would be perfectly fine with those three things.

What is an embarrassing fact about you?

I am a legitimate stalker. I guess it was sophomore year here, I actually had rounds I would make. I would go around and make sure everyone was safe and to find out



BENJAMIN JOHNSON / OREDIGGER

Rock Chick. Jenny shows off her climbing gear.

where everyone was. That is a little known and kinda creepy fact about me. I called it "making my rounds."

Do you have any advice for the freshmen this year?

Don't freak out, don't stress over things, and live every day doing the best you can - not worrying too much about tomorrow.

M

M-ulators

M-ulators is a student program of the Colorado School of Mines Alumni Association

Please Save-the-Date for upcoming "M"-ulator events:

Wednesday, November 12 CEO Panel Reception

Meet and mingle with successful alumni corporate leaders and CEO's of top corporations around the world.

When: Pre-reception, 6:00pm - 6:30pm
Panel Begins @ 6:30pm (sharp)
Where: Green Center
Food: Light appetizers and beverages will be provided.
Contact: Alison Wheelock at alison.wheelock@is.mines.edu or call 303-273-3424 to RSVP.

Thursday, December 4 Holiday Party

Join fellow "M"-ulators, alumni, friends, family and President Bill and Karen Scoggins for some holiday cheer!
Stay tuned for more details!

Not a member of the "M"-ulators? It is not too late to join! Go to www.minesonline.net and click on Membership for more information, or you can call us at 303-273-3295 or email csmaa@mines.edu.



Colorado School of Mines
Alumni Association

Faculty Spotlight:

Dr. Neal Sullivan

Patrick Beseda
Staff Writer

For many students, the professor-student relationship consists of note taking, test taking, and a final handshake at the end of the course. What most students don't realize is that their professors are, more often than not, diverse, interesting, and friendly. Case in point comes in the form of Dr. Neal Sullivan.

One Mines sophomore said about Dr. Sullivan, who teaches Fluid Mechanics, "He's really great, very knowledgeable, and to the point. But he's funny and easy to relate to at the same time." Another Mines student related a story about Dr. Sullivan, "He substituted in our Fluids class once or twice; he was really cool and funny."

Sullivan has the same attitude about the students at Mines. "The students are fun. They're full of energy and hold this really great sense of natural optimism. They're here to better themselves and they can't help but be optimistic about what they are doing with their lives." He said that the faculty at Mines are also optimistic, "But it's a different kind of optimism. They are optimistic about their research, their students, or their career. You don't always get that in the industries."

Dr. Sullivan has been at the Colorado School of Mines (CSM) since 2004, teaching the Fluid Mechanics and Fuel Cell Science and Technology courses. Sullivan was educated at both the University of Massachusetts and University of Colorado as a mechanical engineer. Today, he is the Director of the Colorado Fuel Cell Center (CFCC), which is one of CSM's top laboratories. As the Director, Sullivan oversees the projects of students, researchers, and post doctorates. He explains his day to day activities, "I've got 8

grad students, and they each have projects, and the undergraduates too. It's always exciting. There are always fun challenges and problems to solve."

Dr. Sullivan has a unique view about the future of the CFCC, "At first we focused on making the actual fuel cells; how to make them and making them better. But a single piston in an engine doesn't make the wheels turn. It takes a whole system to make it work. Fuel cells need that, and that is where we're going." When speaking of the future, Sullivan exhibited a sense of excitement, "You can't help but be optimistic. The Fuel Cell Center's focus is basically on energy. It is a high profile problem, and it spans both political parties. I like to think that it's all not just talk. I'm psyched." He also said, "It's a good time to be a grad student, especially here at Mines. There are a lot of great programs and paid research opportunities."

Having experience at both CU-Boulder and Mines, Sullivan has an interesting perspective on how the two schools relate, "There are a lot of similarities, like the technical focus and the academic focus. But the environment is so different." He explained the size difference between the schools, "You're small at CU, but at Mines, the students take a certain ownership of the campus, and the individual can make a visible impact on the whole." Adding to the differences he mentions, "Oh and the CSM football team is much more intelligent. They're doing it for the love of the sport. They really bring substance to the term 'student athlete.'"

In his free time, Dr. Sullivan enjoys several hobbies. When walking into his office, among pictures of snow covered mountains and a golf club, one is greeted by a near life-size autographed poster of Johnny Damon, the star of the Boston Red Sox's 2004 championship team. Sullivan is an alpine skier and likes to play golf. He related a story about a golf course in Boulder, "It's this cheap course I like to play at, but all the hackers are there, it's like playing in Iraq. They like to wait until the ball is right on top of you, and then yell 'fore!' It's a good way to take one right in the chops." He's also an avid reader, and recommends the book *The Cider House Rules*, by John Irving. "It makes me question my own view of morality, and how gray it all is. It makes me wonder about that middle ground." On the topic of music, Sullivan recommended the album *Versatile* by electronic, hip-hop, broke funk based group Reverb and the Verse, which will perform on Monday, January 19 (MLK Day) at 5:15 PM in Friedhof Hall.

Leaving the students with a few words of advice Sullivan said, "Don't let classes get in the way of your college education. I didn't make that up. Twain did. I don't know, they say Twain made up everything."



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Campus benefactors

Nathaniel P. Hill

Erik Lord
Staff Writer

While it is known that students at the Colorado School of Mines have little to no free time, one should always take the time to learn something new. On your next stroll through campus, take five minutes to stop on the east wing of Hill Hall, home of the Department of Metallurgical & Materials Engineering, and read about the school benefactor for which the building is named, Nathaniel P. Hill. You will discover that Hill was a United States Senator for Colorado from 1879 to 1885 and that he held the position of Professor of Chemistry at Brown University. However, this small biography is really just skimming the surface. The story of Nathaniel P. Hill is much more complex and encompasses more depth.

Hill was born in Montgom-

ery, New York, and he eventually graduated from Brown University in 1864. In 1865, he made his first trip to Colorado to investigate mineral resources, but he did not stay long. He spent the next two years overseas in Swansea, Wales and Freiberg, Saxony studying metallurgy. His international endeavors proved fruitful as Hill returned to the United States with a perfected method of smelting gold from complex sulfide ores. He returned to Colorado in 1868 and immediately established the Boston & Colorado Smelting Company at Blackhawk.¹

In the historical book entitled "Give 'em Hell, Mines!" Den Galbraith explained how Hill's smelting breakthrough laid the framework for the study of metallurgical engineering. "Hill proved a point," explained Galbraith, "Trained engineers could help save Colorado's mining industry." It was upon that very tenet that our beloved

Colorado School of Mines was founded just six years after Hill's discovery.

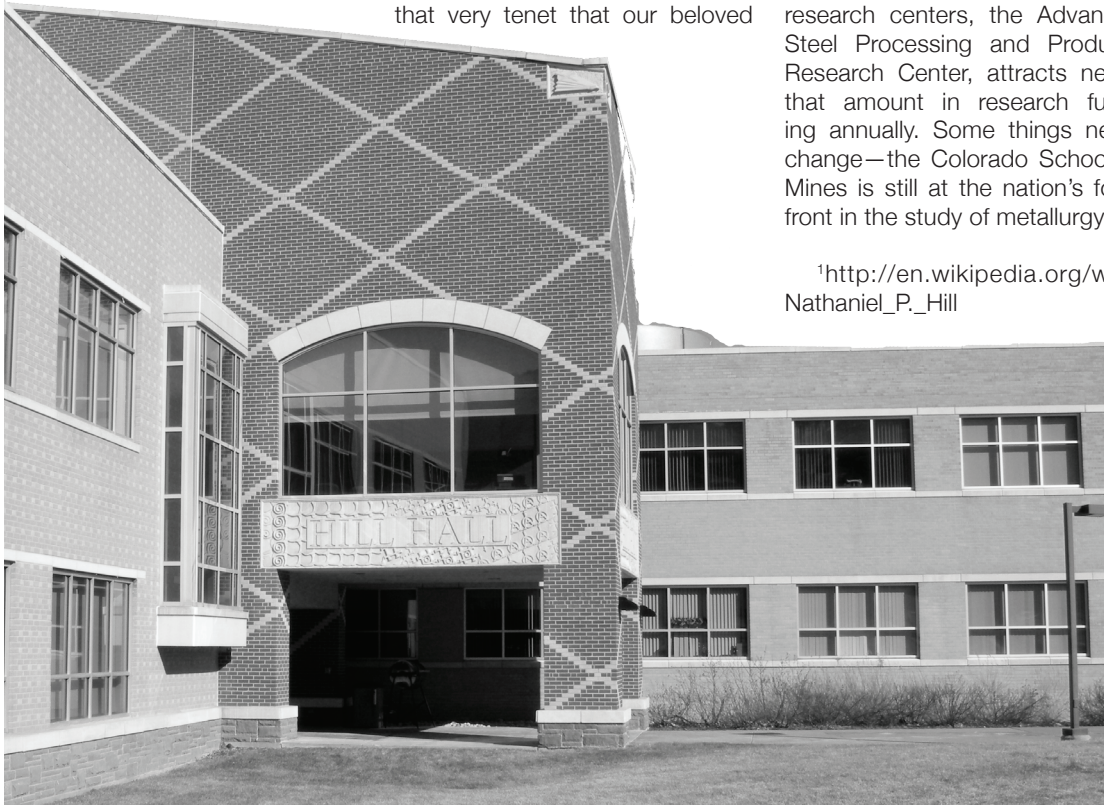
Fittingly, when the Territorial School of Mines was established in 1874, Hill was one of just eight members chosen for Mines' very first board of trustees.

Hill spent the majority of the rest of his life in public service, as a mayor and later as Colorado State Senator. He was often described as a "prim" gentleman who "didn't smoke, drink, or swear."

Hill was always true to his roots as a metallurgist, contributing his time and energy as the chairman of the Congressional Committee on Mines and Mining.

Things have changed since the days of Nathaniel P. Hill, who passed away in 1900. The construction of Hill Hall was completed in 1958 at a cost of \$1.25 million in state funds. Today, just one of the building's numerous research centers, the Advanced Steel Processing and Products Research Center, attracts nearly that amount in research funding annually. Some things never change—the Colorado School of Mines is still at the nation's forefront in the study of metallurgy.

¹http://en.wikipedia.org/wiki/Nathaniel_P._Hill



BREE WALTMAN / OREDIGGER

Club spotlight: CSM Judo club

Spencer Nelson
Content Manager

The first impression of the Mines Judo Club is complete chaos. People are being thrown through the air, wrestling on the floor, and smiling when they get up. To make it all weirder, they are all wearing matching uniforms. Anywhere else, this activity would look completely ridiculous. However, it is all part of the program at the bi-weekly meetings for this club.

Judo, meaning literally "the gentle (or giving) way," is a form of martial arts heavily dependent on grappling and throwing. According to the instructor, Rich Mignogna, Judo received its name not because it is gentle, but because it uses the other person's strength and momentum against them. As Mignogna put it, "If your opponent wants to go one way, you say, 'Okay, we'll go this way, and then a bit further.'" Instead of depending on the individual's strength, judo is a redirection of an opponent's strength to his detriment.

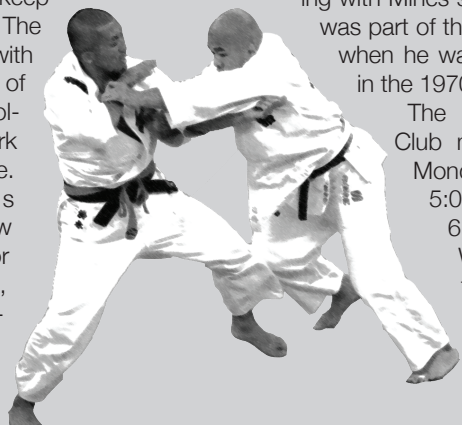
Many students enjoy judo because of its physical aspect. One student, Andrew, likes the workout: "It supplements the other stuff I do to keep in shape." The club starts with 20 minutes of warm ups, followed by work on technique. Members learn new methods for throwing, forcing submission, and how to pin an opponent. They

practice these methods on each other in both repetitious and practical ways. After practicing a single move for a while, they move on to fights between two people. This continues for the rest of the night.

"Judo is the only sport I've really, really enjoyed," said a member, Colin. "It's a great work out and I can enjoy it the way I like." Due to the nature of Judo, advancing in skill also involves a significant increase in control. As a result, Judo can be very competitive, if the practitioner so desires. Instead of using personal strength to inflict harm on the opponent like most martial arts, judo focuses more on preventing the opponent from furthering his attacks. Therefore, a high level of competition can be achieved. Competitors don't need to wear padding since there is little contact beyond being grabbed. Yann, a member of the Judo Club, reinforced this idea, "It is nice to be in a sport where you can exert yourself fully and still not injure the other person."

"It is fundamentally different from most sports... Judo is practiced all over the world," Mignogna enthusiastically spoke of the sport he loves. Being a Mines graduate himself, he loves working with Mines students. He was part of the Judo Club when he was a student in the 1970's.

The Mines Judo Club meets every Monday from 5:00 PM to 6:45 PM and Wednesday from 5:00 PM to 7:30 PM in the Rec Center Gym.



LILY GIDDINGS / OREDIGGER

CSM students become cadet commanders

Frances Aguilar
Guest Columnist

Colorado School of Mines (CSM) Undergraduate Senior Jacob Flatz has been selected to serve as Cadet Wing Commander for the entire Air Force ROTC Detachment 105 Unit for Spring, 2009 Semester. Jacob will oversee all cadet operations for the entire Detachment which includes University of Colorado at Boulder, University of Colorado at Denver, University of Colorado at Colorado Springs, Colorado School of Mines, University of Denver, Metro State, Regis University, Front Range Community College, Arapahoe Commu-

nity College, Colorado Technical Institute, Colorado Christian University, and DeVry University.

Eight of approximately 200 cadets applied for the Wing Commander position for which Jacob was chosen. Jacob is majoring in Mechanical Engineering with mi-



Cadet Wing Commander, Jacob Flatz

nors in Economics and ROTC.

CSM Army ROTC student Brian Gaudette has been named Cadet Battalion Commander for the Army ROTC Buffalo

Battalion for Spring, 2009 Semester. Brian will oversee all cadet operations for the entire Buffalo Battalion, which includes University of Colorado at Boulder, University of Colorado at Denver, Colorado School of Mines, Metro State College, Regis University, Colorado Christian University, Colorado Technical University, Johnson and Wales, Arapahoe Community College, Front Range Community College and Red Rocks Community College. Brian is a Student at Denver University, and attends ROTC classes at CSM.



Cadet Battalion Commander, Brian Gaudette

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Mainstream Albums

1. Fleet Foxes – *Fleet Foxes*

Although a debut album, the Fleet Foxes sound more mature and together on their self-titled release than most bands ever sound. Harmonically, the band sounds almost immaculate. They create an ethereal mood which is hard to lose after listening to the album. Although lyrically straightforward, the music is the important part of this album and it is executed astonishingly well. Listen to “Tiger Mountain Peasant Song,” “White Winter Hymnal,” and “He Doesn’t Know Why.” *-JR*

2. Vampire Weekend – *Vampire Weekend*

The New York indie scene broke out nationally this year, and leading the wave was Vampire Weekend. Their sweater-vested semi-classical approach to music is infused with African drum beats and subtle pop-culture references. Catchy melodies and lyrics match the equally well orchestrated instruments on VW’s first album. Listen to “Mansard Roof,” “A-Punk,” and “I Stand Corrected.” *-TW*

3. Flight of the Conchords – *Flight of the Conchords*

It’s not often that a comedy album makes the top ten albums list for a year, but Flight of the Conchord’s self-titled album is more than your average comedy album. The first release from the New Zealand duo is satirical and sarcastic in every sense; even the music mocks popular styles. The songs are simultaneously well-produced musically and hilarious lyrically. Listen to “Think About It,” “Hiphopotamus vs. Rhymenoceros,” and “Business Time.” *-JR*

4. Kanye West – *808s & Heartbreak*

Innovation occurs when risks are taken. Kanye’s newest record does not pick up where 2007’s *Graduation* left off, but in-

stead cuts a new track. Markedly simpler in production, *808s* relies heavily on three things: drum machines, lyrics, and auto-tune. This move produced one of the most honest sounding hip-hop records released last year. Listen to “Paranoid,” “Street Lights,” and “RoboCop.” *-TW*

5. Death Cab For Cutie – *Narrow Stairs*

A mark of a great song is when the same melody from it can be repeatedly played without losing interest. Death Cab for Cutie tested this theory multiple occasions on this album and proved it true. Although being deceptively simple, many songs from this album have the potential to stay around for years. With a superb blend of light vocals and mixed instruments, this album will not soon be forgotten. Listen to “Cath...” and “No Sunlight.” *-SN*

6. TV On The Radio – *Dear Science*

In their newest album, TV On The Radio brilliantly uses drum loops and deep, eerie lyrics to present an interesting and fun record. *Dear Science* is at times chaotic, at times somber, and at times full of grandiose beauty. At all times, however, it is intelligent, entertaining, and deeply poignant. Listen to “Lover’s Day,” “Golden Age,” and “Halfway Home.” *-JR*

7. Anberlin – *New Surrender*

Shifting into a more mainstream sound has not stopped Anberlin from continuing their stream of catchy lyrics and melodies. Despite a deeper dependence on a synthesizer, Anberlin’s music continues to be driven by fast guitars and unforgettable lyrics. Listen to “Breaking” and “Haight St.” *-SN*

8. Coldplay – *Viva La Vida (Or Death and All His Friends)*

Hailed as the new U2, Coldplay shot to stardom unflinchingly with their previous albums. Holding up under the intense expectations of fans and critics alike, *Viva la Vida* portrays Coldplay’s classic sound

in some songs, while musically progressing in others. Listen to “Lost!” and “Violet Hill.” *-SN*

9. Snow Patrol – *A Hundred Million Suns*

Snow Patrol combines a fast-paced alternative rock sound with simple melodies and song structures for a relaxing album. With an unusual singing style that varies through the album, *A Hundred Million Suns* keeps originality close to its core. Listen to “If There’s a Rocket Tie Me To It” and “Disaster Button.” *-SN*

10. I Hate Kate – *Embrace The Curse*

This record mixes 80’s new wave with modern pop to produce an enjoyable listening experience. Perhaps one of the best parts of this album is that there is definite ebb and flow; not every song sounds the same. Listen to “Bed of Black Roses,” “It’s You,” and “I’m In Love With A Sociopath.” *-TW*

Albums You Should Know

1. Ra Ra Riot – *The Rhumb Line*

With a strong string section composed of a violin and a cello, Ra Ra Riot’s quick yet relaxed sound is excellent for studying, but is also upbeat enough to dance to. With a perfect blend of all instruments, they skillfully move from songs reminiscent of the Beatles to an 80’s style synthesis-driven song to a Kate Bush cover written in waltz time. The phenomenal chemistry of the band is well represented by all aspects of the album. Listen to “Dying is Fine” and “St. Peter’s Day Festival.” *-SN*

2. Sigur Rós - *Me su í eyrum við spilum endalaust*

Beautiful and unique soundscapes fill Icelandic band Sigur Rós’s newest release.



Tim Weilert, Spencer Nelson, and Jake Rezac
Content Managers



Must See Movies

Better sequels

Benjamin M. Weilert, Staff Writer

For many of us, the spring semester is our second semester of this academic year. In a sense, it is the sequel to the fall semester. There’s the same locale, same characters, and slightly different challenges. For many movies, the sequel is heralded as a cry for more money, trying to cash in on an already successful film. More often than not, these sequels pale in comparison to their original partners, and never fully hold up under the scrutiny. However, there are some exceptions of films that were better than the original movie they follow. This week’s Must See Movies examines three such movies.

1. *Spider-man 2* (2004)

Since the turn of the millennium, the comic book hero movie has become a more serious art form and is starting to draw attention in the form of awards. There are many reasons for this, including plots that have depth and intrigue, along with the special effects needed to bring the comic book action to the screen. The recent formula for the superhero movie series is simple, but tends to produce sequels that are better than the original. In the original movie, *Spider-man* (2002), the audience watches Peter Parker gain his powers and the exposition that goes with becoming a superhero. However, in the sequel, Peter already has a feel for his powers and has settled into his superhero routine. Perhaps the best reason why the sequel was better than the original is due to the choice of villain. In the original, Spider-man faces off against the Green Goblin, who (in my opinion) pales in comparison to the depth of Doctor Octopus. With a better villain and a settled superhero, a great movie ensues. This formula also applies to the Batman franchise with the 2008 release of *The Dark Knight*.

2. *Terminator 2: Judgment Day* (1991)

Terminator 2 is perhaps the only movie to make an antagonist out of the protagonist of its previous movie. In the first *Terminator* film, Arnold Schwarzenegger portrays a time traveling cyborg who has come back from the future to kill the mother of John Connor, the leader of the future rebellion against the machines. However, in the sequel Schwarzenegger’s character is back to protect John from the next model of Terminator. With the switch of antagonist to protagonist, *Terminator 2* gives a more level playing field for the battle to protect humanity’s only hope. As with the comic book hero movie formula, the first movie removed a lot of the exposition from the sequel so the action could play out without as much back story. Also, the improved special effects make both Terminators far more realistic, thereby pushing this sequel past its original.

3. *Star Trek: The Wrath of Khan* (1982)

Appearing three years after its original, *The Wrath of Khan* proves to be a much better film due to a much needed antagonist, which was missing from the first movie. In *Star Trek: The Motion Picture* (1979), most of the movie is spent watching the Enterprise panning across far-out space scenes and the reactions of the crew as they sit there and wait to find an abandoned satellite that was sending out menacing signals. However, in *The Wrath of Khan*, an old enemy of Captain Kirk (William Shatner) has appeared seeking revenge by seeking out a potentially dangerous weapon. Another *Star Trek* sequel that is worth a watch is *Star Trek IV: The Voyage Home* (1986), but only for its comedic value.

For Homework – See *The Dark Knight* (2008)

most exciting release to date. Lead singer Cave sounds like any punk rock frontman should – full of swagger and an attitude which compliments the driving bass and drum beats. Listen to “Dig, Lazarus, Dig!!!,” “Albert Goes West,” and “We Call Upon the Author.” *-JR*

6. Nada Surf – *Lucky*

Nada Surf is one of those bands that has been around for over 10 years and has not released a bad record. *Lucky* showcases a more mature and developed sound with beautiful melodies and bright lyrics. Listen to “Whose Authority,” “Weightless,” and “Are You Lightning?” *-TW*

7. My Morning Jacket – *Evil Urges*

If My Morning Jacket wanted to make an album which was easily pigeon-holed, they wouldn’t have made *Evil Urges*. They spend time flirting with psychedelic hippie rock, play with folk roots, and throw in some late-80s electronica. However, each song is without genre, and distinctly My Morning Jacket. Listen to “I’m Amazed,” “Evil Urges,” and “Touch Me I’m Going to Scream Pts. 1 & 2.” *-JR*

8. The New Frontiers – *Mending*

A bold mix of indie-pop and alt-country, the only full length release of the now-disbanded New Frontiers is a monument to their musical prowess. *Mending* covers a broad range of emotions and poses deep questions. Listen to “Black Lungs,” “This Is My Home,” and “Who Will Give Us Love?” *-TW*

9. We Shot The Moon – *Fear And Love*

Formed in the wake of Waking Ashland’s breakup in 2007, We Shot the Moon managed to produce a well-put together album within a year. The piano-based songs are well-balanced with their lyrical style. Uplifting and upbeat, their songs leave the listener feeling quite positive. Listen to “LTFP” and “Julie.” *-SN*

Movie Review: My Bloody Valentine

Michael Rose
Staff Writer

Let me begin this review with a disclaimer. If you do not wish to read spoilers, or if you do not like bad reviews, turn back now. Otherwise, forge ahead, because I’m about to save you \$8.00.

My Bloody Valentine was originally a low-budget Canadian slasher film released in 1981. Famous for having an entire nine minutes of footage cut from the movie due to intense gore (which was only released in an uncut version a week ago when Lionsgate Films acquired the rights to the movie), it most certainly lived up to its name as a B-grade horror film.

The remake really isn’t much better. Sporting both a normal and 3-D version, the film attempts to branch out into a largely unsuccessful media. Most 3-D movies are adapted for 3-D, and quite poorly at that. Fortunately, I opted for the normal version, though I heard many expressing their displeasure at the 3-D version.

The story begins in a small mining town where an inexperienced coal miner, Tom Hanniger (Jensen Ackles), causes an accident in the coal mine. The accident is thought to have killed all but one miner, Harry Warden, who is sent into a coma. It’s later revealed that the miners who were killed in the “accident” had giant holes through their skulls. Then, out of nowhere, Harry Warden wakes up (Can you guess on what day? I’ll give you three guesses and two don’t count) and slaughters twenty-two people, including many party-goers down at the mines before being shot by the sheriff and buried.

Ten years later, Tom Hanniger returns to town to sell his majority share of the mine, much to the outrage of local residents. Coincidentally, ‘Harry Warden’ returns and murders a man and woman at the same motel Tom Hanniger is staying

10. The Gaslight Anthem – *The ‘59 Sound*

The ‘59 Sound channels the classic sound of Bruce Springsteen while adding straightforward punk sensibility and style. This record inspires a certain sense of nostalgia with enjoyable and danceable tunes. Listen to “Old White Lincoln,” “The ‘59 Sound,” and “Miles Davis & The Cool.” *-TW*

Local Releases of Note

3OH!3 – *Want*

In an innovative fusion of rap and techno, these two white guys from Boulder certainly have gained massive popularity across Colorado. Selling out their highly energetic shows quickly, 3OH!3 has developed a large fan base in this state. Their album goes from one dance-worthy song to another with impossible to forget melodies. Listen to “I Can’t Do It Alone” and “Starstruck.” *-SN*

Fear Before – *Fear Before*

Hardcore music has never been more accessible than with Fear Before’s newest release. Opting to focus more on melody and lyrics instead of sheer heavy sounds, this record is enjoyable even outside of a mosh pit. Listen to “Treeman” and “Review Our Lives (Epic).” *-TW*

DeVotchKa – *A Mad & Faithful Telling*

DeVotchKa, the Denver band made famous by their appearance on the *Little Miss Sunshine* soundtrack, continues to use unique instrumentation and imitate unique music styles very effectively in their newest album. They incorporate Eastern European, Spanish, Mexican, and American music in a unique and interesting way. Listen to “Basso Profundo” and “Along the Way.” *-JR*

at after an unnecessarily long, sex-filled scene filled with gratuitous nudity. The woman, Irene, plays the stereotypical role of a dumb blonde to a T, passing by a cordless phone and attempting to protect herself from his pickaxe using the wire frame of a bed. In all honesty, the woman from Scary Movie who grabbed a banana and followed the sign “Certain Death” was more intelligent.

Through several blatantly obvious clues and sequences, the movie allows you to draw the conclusion that Tom has taken on the identity of Harry Warden. Not long after, it then spoon feeds this conclusion to the audience, along with an explanation of how Tom had slowly gone insane over the years since almost being murdered. It’s as if the writers believe the audience is thick enough to not have put together the pieces with the glut of glaring clues. Much like beating a dead horse, there are only so many times you can make the identity of the killer completely obvious. Predictably, Tom’s identity is revealed as the murderer to the other slightly brain-dead characters and he attempts to murder the other main characters. At the end, in a desperate bid for an unnecessary and unwanted sequel, Tom escapes in disguise and the movie ends.

If my review wasn’t obvious enough, My Bloody Valentine was the worst \$8.00 I’ve ever spent and one hour and forty-one minutes of my life I’ll never get back again. Maybe they’ll actually film a decent horror film with a plot one day. I’ll keep looking out for flying pigs in the mean time.



TECH BREAK

Lenovo IdeaPad U330: Macbook Killer?

ian Littman, Tech Break Columnist

If you are looking for another Apple product review, I merely offer you well-wishing for the happy new year and the promise that, when Apple's new Macbook Pro 17" model comes out, I'll review that. For people who don't want to hear another word about Apple, I've got just the ticket: a review of Lenovo's MacBook killer.

No, the company who used to be the computer arm of IBM doesn't pit the 13.3-inch, 4.2-pound Montevina-equipped notebook against Apple's product in marketing. However, I do. The entry-level models of both are the same price if you're a student, though the higher-end model of the U330 (what I bought myself for Christmas, at a bit of a discount) is just \$50 more and is worth the upgrade.

Before jumping into a review of what sets this notebook apart from the competition, let me give a spec list: 2 GHz Intel Core 2 Duo Processor with a 1066 MHz bus, aka the P7350. Yes, it's identical to Apple's part for their low-end aluminum MacBook. The memory, likewise, is similar in specification, being 2 or 3 GB of 1066 MHz DDR3. The hard disk is 250 or 320 GB of 5400RPM storage. The optical drive is your standard tray-loaded DVD burner. Wireless

is provided by Intel's 5100 chipset (which is N-capable) and Bluetooth is also in the mix. It comes with Windows Vista Home Premium, standard fare for such a system.

The cool things about this computer start with the build quality: rock solid. That includes the keyboard, which has less travel than I'd like, but otherwise is superb in typical ThinkPad fashion. Yes, it's black plastic, shiny in some places, matte in others, and with a pinstripe design, it quietly making the palm rest area stand out from Joe average laptop. The finish does attract fingerprints and dirt, but looks incredibly classy, yet with business-y aspects inherited from the computer's Thinkpad lineage. Speaking of form and function, this computer is one of the lightest, full-size, 13.3" notebooks out there, weighing in at a little less than 4.2 pounds, several ounces lighter than the already-light aluminum MacBook. Granted, the IdeaPad U330 isn't quite as thin, but the slight wedge shape and small battery bulge make the computer easy to hold on the go, and a nice fit into a backpack. It's no MacBook Air, but then again, it is a lot more powerful...

Speaking of power, the computer can keep going for four to

four and a half hours on a charge with integrated graphics or two and a half to three on dedicated graphics. Yep, like the MacBook Pro, the Lenovo IdeaPad U330 has two graphics chips inside, one for performance and the other for battery life. The big difference is that the IdeaPad's dedicated graphics chip performs the same as the MacBook Pros' (and MacBooks') integrated part, with the IdeaPad's integrated Intel X4500 chip (twice as good as the last revision) pulling in about half the performance of the dedicated ATI Radeon HD 3450. Disappointing, but you do still get decent performance from both chips, enough to get playable frame rates from modern games on decent settings at low resolutions. The output medium, in most cases is a 13.3-inch LED-backlit screen that does a good job in both the brightness

Sound-wise, there's nothing spectacular to report: dual stereo speakers. Output is of good quality and somewhat loud, and you have both analog (3.5mm) and digital (HDMI) outputs. As an added bonus, Dolby software lets you fool with sound profiles and other aural settings. On a snazzier note, audio volume, equalizer settings, media controls, and even an application shortcut can be found in a touch sensitive strip above the keyboard.

To round out the package, the IdeaPad has a 1.3 megapixel webcam and dual microphones, standard fare for laptops nowadays. The quality isn't great, but there are worse webcams out there. Besides, if you really want to stream video, you're going to use the included FireWire port and hook up a real video camera (yep, one big feature the MacBook just doesn't have). Speaking of ports, the IdeaPad rounds out its lineup with Gigabit Ethernet and mic in, though for expansion, you also get an ExpressCard slot and a SD reader up front. Plus, RAM, hard disk, battery, and wireless are all easily switched out when the need arises.

One last thing. Face recognition.

As with all IdeaPads, you can, if you so desire, try to log in and encrypt files with your face...the system is amazing when it works, but in sub-optimal lighting conditions, it'll do no such thing.

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In conclusion, the IdeaPad, depending on your preferences, is a MacBook killer. It's lighter but thicker, cheaper for better specs, more upgradeable, and just plain different from the Mac-toting hordes while remaining of the same performance and stylistic caliber. Plus, it is made to run Windows, which it seems people need around here, and Lenovo is ready to support that operating system, as opposed to Apple's half-hearted porting of a few hardware features over to the non-Mac-OS side. In short, the IdeaPad, despite a few quirks, is a good system with a great price tag, and I would not hesitate to recommend it to anyone, though you definitely won't be "that guy" toting one of these notebooks around.

By the way, if you want more Tech Break, I'm here to oblige; check out the Tech Break blog at www.minesblog.com/techbreak. It's updated often with great content, so if you like Tech Break, you'll like the blog.

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STUDENTS

YOUR STUDENT BODY PRESIDENT, KEVIN DUFFY, INVITES YOU TO THE SEVENTH ASCSM MEETING OF THE YEAR.

The next ASCSM meeting is January 22 at 7 PM in Student Center Ballrooms A and B.

We want to hear from you! Come speak up at your next student government meeting.

\$25 gift card raffled for the audience at each meeting.

Beer Review: Turbodog Brown Ale, Abita Brewing, Louisiana

Akira Rattenbury Staff Writer

Back to the grindstone and school got you down? Turbodog is here to help! As I poured the first glassful of deep brown, reddish-hued porridge, the blended malt and hoppy aroma tantalized my nostrils. A good head and some syrupy lacing made me eager for my first sip. The anticipation was justified, chocolaty malts with a hint of bitter hops make up a combination heaven. Turbodog saves the day.

As I smacked my lips to savor the aftertaste, I was left with the stingy taste of watery alcohol. No malt essence tingled with the leftover hops. The second sip was much less exciting and left me perplexed. Did I just buy a mutt disguised as a pure-bred?

This beer is decidedly torn between dry malt stoutness of a Guinness and the hoppy sweetness of an IPA. It is sweet like an English brown should be, but the extra Willamette hops do not blend well with the original pedigree. Add German yeast and you have an ugly mutt for sure.

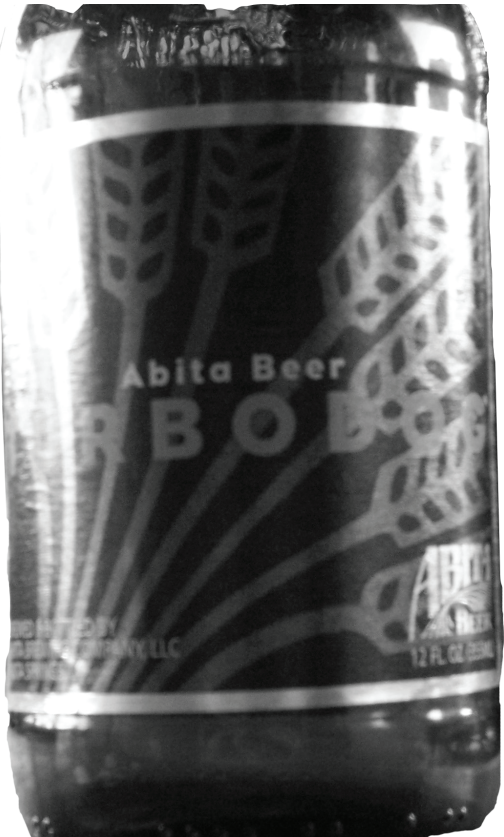
The flavors clash instead of fuse. The maltiness leads the band but leaves the show early, leaving a nasty hangover-esque alcohol taste.

The name is ironic. You imagine Turbodog to be something spectacular. Instead it most closely approximates a hyper dog trying to impress you by humping your leg furtively at light speed. This will leave you annoyed. Very bad Turbodog.

I will admit the non-traditional packaging and stylish label lured me into buying this mixed-up puppy. The cuteness distracted me from the beer's overwhelming bad behavior and immaturity.

Turbodog is a depressing backwoods crossbreed of hops (good) and caramel maltiness (also good). Other brewers have been able to effectively fuse hops and sweet malts like Avery's Ellie's Brown or a Samuel Smith, but this beer gets the pedigree all wrong.

Ready for an underwhelming mouth clash with non-existent after taste? Try Turbodog. Worth a try if your friend buys it, but give this beer a few years to grow up.



AKIRA RATTENBURY / OREDIGGER

Principally Irked

Good Riddance to the Traitor-in-Chief

Andrew Aschenbrenner
Staff Writer

Tuesday, January 20, 2009 will mark the end of an awful era in America and, hopefully, the beginning of a better one. The 43rd President of the United States leaves office at noon that day, and he leaves in his wake remarkable damage and

The President cannot make up the rules and should not be able to assert himself as above the law of the land. de- struc-

tion. A man who once presumed to take our country into the 21st century instead has brought our country to its knees.

It certainly wasn't all his doing, but he was a willing accessory to the crimes perpetrated against the American people and against the U.S. Constitution. With an assist from people like John Ashcroft, Dick Cheney, Donald Rumsfeld, Phil Gramm, and Alan Greenspan, George W. Bush has built a coffin to bury the land of the free and the home of the brave. It remains to be seen whether we will actually be buried in it.

I haven't been shy to blast Bush for his arrogance, hypocrisy, or general incompetence in the past for one simple reason: thinking about what the man has done makes me positively apoplectic, and it should make you just as angry.

A President is supposed to be a manager, a commander, and a leader. What Bush has been is a denier, a liar, and a "decider." He reminds me of a spoiled child who is so determined to be right that he persists with a lie, bludgeoning the truth until those who actually know the truth finally give up, allowing him to make his own reality.

When a President of the United States is inaugurated, he must swear that he will do everything in his power to "preserve, protect, and defend the Constitution of the United States." Frankly, I don't know if Bush was paying attention when he took that oath, because he seems to have done everything he could to distort and diminish the Constitution.

I truly believe that there is only one reason that the United States continues to exist today and that is because we have the strongest founding document of any country in the world. Our Constitution is the model for virtually every other democracy in existence, and for good reason. It has an excellent balance of freedom, equality, and government. However, the Bush Administration treated it like some old scrap of paper.

This is why the eight years of the George W. Bush Presidency have been incredibly damaging to our nation and our way of life. I don't even need to list all the devastating and irresponsible policy choices that were made, or the scandals such as Abramoff, or the blatant ignorance of economic

troubles and inconsistencies, or the massive spending and debt.

There have been protests of Bush's arrogance of power, but that didn't stop "the decider." He used signing statements and executive orders to change meanings of laws, to assert that his Administration doesn't always have to obey the law, and to establish new powers for himself as President.

Signing statements and executive orders should be the way a President determines the meaning of a law and/or utilizes his authority to move the nation forward. However, the President must always be accountable to the Constitution, and he shouldn't be able to arbitrarily make the law or establish new powers. President Bush has abused executive orders and signing statements to the point where he has been a danger to his country.

But Bush didn't just disregard the law with regards to himself and his Presidential power. He also conducted an assault on your civil liberties. From warrantless wiretaps to domestic spying to the suspension of habeas corpus under the Military Commissions Act, Bush and his cronies searched out the best ways to diminish the protections enshrined in the Constitution.

On top of his past actions, he recently called the scandal of prisoner abuse at Abu Ghraib, one of the biggest international embarrassments in U.S. history, a "disappointment."

A President is supposed to be a manager, a commander, a leader.

Administration announced to the world that it would refuse to abide by the Geneva Convention provisions regarding treatment of prisoners of war because terrorism detainees would be defined as "enemy combatants." Mind you, anyone, even a U.S. citizen, can be designated as an "enemy combatant."

Such ridiculous statements make me think that if the Bush Administration defined war as "humanitarian efforts" it might have randomly bombed other countries and asserted that it was just trying to help. Numerous other similar situations during the Bush Presidency contain damnable evidence to his contempt for the rule of law.

The President cannot make up the rules and should not be able to assert himself as above the law of the land. Bush did those very things, which violates Constitutional provisions such as separation of powers and makes him a traitor.

Richard Nixon is perhaps the only other President to declare himself above the law and he was forced to resign. Unfortunately, Congress and the citizens of this country have utterly failed to hold Bush accountable. Goodbye, George, and good riddance. Neither I nor the country you have led will miss you.

Minds at Mines

New Year's resolutions

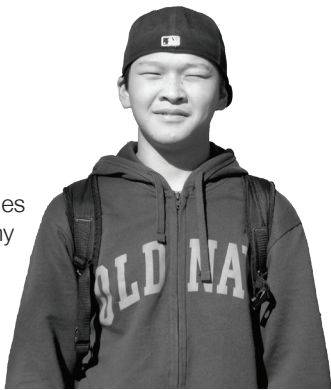
Roby Brost
Staff Writer

After the New Years glitz and glimmer fades, the party cleanup ensues and the population is left with a resolution hangover. Resolutions may differ from person to person, but every year there is a common dilemma. Things that seemed so easy to accomplish in the midst of champagne dreams leave a different sense of bewilderment as people wonder how to proceed. Here on the Mines campus, many students and faculty have New Year's resolutions, and plans to achieve their goals. Perhaps this year will yield many successes. Happy New Year!



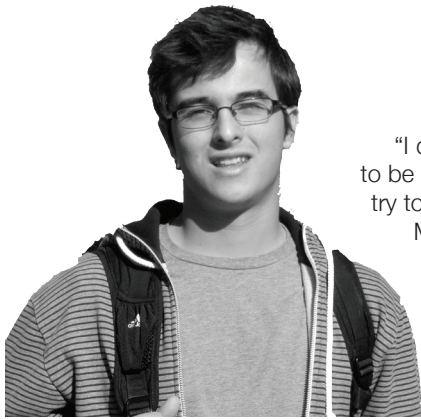
"Personally, one of my goals is to heal one hundred percent from shoulder surgery I had two month ago. Another goal is to receive a higher GPA, by being more focused and having better time management. I chose that one because I was a little disappointed in last semester, and know I could do more. The last is more a personal revolution, I'd like to keep up on my faith, keep better contact."

Courtney Judish



"I'm a new student here at Mines, and my goal is to get as good grades as I can. I plan to accomplish this in that I am going to communicate with my professors and stay focused. No more partying."

Anand Erdenebieleg



"I didn't make any definite New Year's resolutions, but if I did, I would try to be nice to every person that I meet and keep working hard at school and try to be happy with myself, I guess."

Mark Robinson



"I'm a quilter, and I make quilts with a church group for babies. This year my goal is to make nine quilts."

Professor McAuliffe



"I am a transfer student from Red Rocks. My New Year's Resolution is to be on the Dean's List. Ideally I'm working for a 3.5 or above."

Michael Ramirez



"I'm not going to eat fast food this year. It was somebody's idea, and I thought it was a good one."

Lily Nguyen

Recap of 2008 Denver sports

Jake Rezac
Content Manager

Colorado Avalanche
After a poor 2006-2007 season in which the Avs failed to make the playoffs for the first time since the '93-'94 season, the team was considerably improved in the '07-'08 season. The mid-season acquiring of former Av greats Peter Forsberg and Adam Foote helped the Av's make the playoffs.

former head coach Tony Granato. The 2008-2009 season has been less than stellar, with a number of injuries greatly hurting the Avs, who are struggling to stay above .500. As of writing, they are 22-22, and in last place in the Northwest Division.

Denver Broncos
The 2008 Broncos seemed to have two different teams take the field, depending on the week. There was one team which beat the New York Jets 34-17 and had a three game lead in the AFC West going into Week 15. There was also the team which gave the Kansas City Chiefs one of their two wins and lost the final three games of the regular season, keeping them out of the 2008 playoffs. This loss of first place marked the first time in NFL history that a team

would have a three game lead going into the last three games and lose all three. Partially in response to the poor play at the end of the year, head coach Mike Shanahan was fired on December 30, two days after the end of the regular season.

Denver Nuggets
The 2007-2008 season was a good one for the Nuggets. It included a game on March 16 in which the Nuggets beat the Seattle SuperSonics 168-116, scoring the third most points in a single game in NBA history. After finish-

The 2008 Broncos seemed to have two different teams take the field, depending on the week.

ing 50-32 in the regular season, the team ended up as the 8th seed in the Western Conference in the 2008 NBA playoffs. They would be swept by the Los Angeles Lak-

ers in four games. With the season ending, the Nuggets would increase their salary cap flexibility by trading star player Marcus Camby for a second-round draft pick. On November 3, the Nuggets would trade another star player, Allen Iverson, for Chauncey Billups, Antonio McDyess, and Cheikh Samb. Despite trading away two star players, the Nuggets have thus far had a good season, having a 27-14 record as of writing. They are currently in first place in the Northwest Division and have won seven of their last ten.

Colorado Rockies
At the beginning of the 2008 season, there was a great amount of hope surrounding the Rockies, who were coming off a trip to the World Series. However, the offsea-

son loss of star second baseman Kaz Matsui and sub-par playing throughout the year led to a disappointing season in which they finished 74-88, placing them third in the National League West. Despite the substandard play, there were a few remarkable moments. On April 17, the team beat the San Diego Padres in 22 innings. The game lasted over 6 hours and was the longest game in Rocky history. On July 4, the Rockies came back from a 13-4 deficit to beat the Florida Marlins 18-17. It was the largest comeback win in team history. At the end of the season, the Rockies traded some key players, including star left fielder Matt Holiday for relief pitcher Huston Street, starting pitcher Greg Smith, and outfielder Carlos Gonzales.

Beginners get out

Sarah McMurray
Staff Writer

Of course the Colorado School of Mines (CSM) is known for its academic excellence, but one of the biggest draws for the CSM is, well, the Colorado part. For those of us from our nation's plains and prairies, even breathing can be a little intimidating, let alone all this talk of riding boards and powder, wicking, waterproof sportswear, and shocking price tags. If you are anything at all like me, you are accident-prone. Call me clumsy or call me delicate, but my left index finger just snapped off this past summer playing a game of catch football. My first day on the bunny slopes of Illinois, I tore the ligament off my knee. Driving down a straight road on a sunny day, I rolled the family minivan three times for no apparent reason. Hey, I will fall down walking along the sidewalk on a clear, dry day. And I'm not exactly sure the prospect of a bruised tailbone is going to fit in

with my packed schedule of sitting in classrooms. Enter cross-country skiing. On short notice, some friends and I went up to Tennessee Pass Nordic Center and Cookhouse in Leadville. Those of you who are veterans, please excuse this newbie, but I had always wondered just how cross-country skiing worked anyway. As our Jeep rose in altitude and the snow thickened, I had visions of myself hopelessly trapped in the back country, knee deep in powder, my skis helplessly sliding back and forth on slick snow as I gasped for air, abandoned by my much more skilled friends. Rest assured, fellow novices! The skis have grips to propel you forward! And there are paths with little tracks in them for you to ski along, like one of those Nordic track machines, only better! I stayed only on the green paths and found them challenging enough, but doable. It was an excellent workout and an amazing view everywhere. For those willing to ski a blue

path, you can ski up to a little yurt restaurant. If you have someone you want to impress, make reservations, and for \$75 a person, enjoy some elk steaks. I had no one to impress, so this is all hearsay, but it's reputedly delicious, and they give you headlamps to ski home in after dark. I don't know much about ski lodge ambience in general, but Brian and the rest of the staff were very friendly. The fire was cozy, the hot chocolate delicious, and the music reggae. And the price tag? Only about \$30 total. I have a standing policy of agreeing to things before I have a chance to talk myself out of it. I'll admit, it doesn't always work to my advantage, but this time, it did. Tennessee pass was a great day trip. We drove up to Leadville late morning, skied the afternoon, and came back in the evening, just in time to use the rest of the weekend for coursework. So, if you're a beginner like me, and are looking for something to do - get out.



SARAH MCMURRAY / OREDIGGER

January 10, 2009. View from the back deck of the Tennessee Pass Nordic Center at dusk. Ski trails begin directly below.

Broncos end Shanahan era

Matthew Pusard
Staff Writer

The Denver Broncos have fired their most successful coach in franchise history. Mike Shanahan, the team's head coach and general manager who guided the squad to Super Bowl XXXII and XXXIII, was let go after the Broncos collapsed in the final month of the season. Shanahan's firing surprised many around the league. Owner Pat Bowlen previously called Shanahan his "coach for life," but Denver losing a three-game lead in the AFC West negated that claim. It was the first time in NFL history that a team lost such a lead in December. While Shanahan was regarded as an offensive "mastermind," fully utilizing the talents of John Elway, Terrell Davis, and Shannon Sharpe, his defenses paled in comparison. Ever since the trade of Trevor Pryce in 2006, the team has been unable to create pressure on the quarterback. In the past few seasons, this has led to a reduction in forced turnovers. With the team adjusting to yet another new defensive coordinator and a slew of injuries in 2008, the defense hit a new low. The team was -17 overall in turnover ratio, meaning they gave opponents 17 more turnovers than they got back. This statistic typically has a strong correlation with playoff contention. The only two teams with negative turnover ratios contending for the playoffs, the Broncos and the Dallas Cowboys, ended up missing the playoffs in the last week of the season. According to the statistical analysis website Football Outsiders, the Broncos had the second-worst defense since their stats started in 1995. The site's statistics were compiled by analyzing every play of the 2008 season and assigning a success rate for each team. The Broncos defense contributed to a 26.2% increase in the success rates of their opponents. The worst defense since 1995 was this year's 0-16 Detroit Lions. After nearly two weeks of

searching, the Broncos named Josh McDaniels as their new head coach. At 32, McDaniels is the youngest coach in the NFL. Like Shanahan, McDaniels is another coach with a strong offensive background. He was New England's offensive coordinator during their record-breaking 2007 campaign and helped the offense stay potent in 2008 after losing its MVP, Tom Brady. McDaniels also served as a defensive assistant on New England. His primary challenge will be fixing the defense. One of McDaniels' first moves as head coach was to hire Mike Nolan as the defensive coordinator. Nolan started as a linebackers coach under Dan Reeves in Denver and made his way around the league as a defensive coordinator in New York and Baltimore before a failed head coaching stint in San Francisco. McDaniels and Nolan both are well-versed in the 3-4 defensive scheme so the Broncos defense may undergo a complete philosophy overhaul. This would require a complete roster overhaul. No one, save for Champ Bailey, should be safe on the Broncos defense as they will be looking for new bodies. Luckily for the Broncos, many defensive impact players are set to become free agents this offseason. Albert Haynesworth, Julius Peppers, Ray Lewis, and Nnamdi Asomugha, among others, will all be free agents. The Broncos will also be hunting for defense in the draft. One strong, but early, possibility is ILB James Laurinits, the son of a professional wrestler. A passable defense would make loads of difference for Denver, which has the second-best offense this season, led by Jay Cutler, Brandon Marshall, Eddie Royal, and Ryan Clady. For Shanahan's firing to seem just, McDaniels will have to fix the defense quickly. He has a hard act to follow, since Shanahan won two Super Bowls in his first four seasons in Denver, but McDaniels is no stranger to winning, having won three Super Bowls as part of New England's staff.



Fool's Gold

Back in action (Not what you're thinkin')

Janeen Neri
Chief Fool's Analyst

Colorado School of Mines has frequently been praised over its history for careful use of its students' time. "The students maybe don't realize the full implications of this," said the school's Head Time Partitioner, Evan Neder-Schrüje, "But our system maximizes their effective 'uptime' and decreases inefficient 'downtime' to a degree unmatched by any other U.S. institution... except perhaps a prison. The clearest benefit of this policy is its effect on student retention of material – holidays are nothing but encouragements to intellectual idleness for these students."

Lately, however, even the most judicious management of time by the Time Partitioning Committee (TPC) has not been able to keep pace with the demands of the curriculum. "When [the students] schedules hold a full hour of PA, you know there's a serious problem," said Physical Activities professor and varsity golf coach Jake Merle. Accordingly, the TPC offered EPICS credit last semester to any student that could devise a solution.

Several ambitious students came forward with ideas, which were then examined by the Committee. Patently absurd projects such as "Increase Student Efficiency by Decreasing Stress," submitted by one freshman, were quickly

discarded. Also discarded were any suggestions involving oscillating geese, an oddly popular theme. Despite the high levels of noise, the Committee was able to find two plausible plans. Both options were offered up for a vote in the faculty senate meeting that convened on January 2, 2009.

The faculty senate would not discuss the losing plan with *The Oredigger*, hinting that it might in fact be tried over the coming semester, but would only work if implemented without the student body knowing all the details. The senate was fairly excited about the winning plan, which they described in the official announcement as one that "the students will definitely love. [It] is projected to increase productive time by a minimum of 5%, while only lowering their GPAs by an average of 0.25 points."

The plan involves the use of a new technology called "spacetime flux bubbles," developed by a CU Boulder graduate. Said the inventor, who prefers to go by his screen name, FutureGhost3, "Basically the obstacle with time manipulation is that time is relative, right? So, like, if you 'slow down time' for the entire universe, it doesn't do you any good because atomic interactions and your body processes slow down too, so everything is pretty much exactly the same." The key, FutureGhost3 found, was in the twin

paradox predicted by special relativity. "What the paradox essentially tells us," said FutureGhost3, "is that if you have a set of twins, and you leave one on earth while the other one travels away and back in a rocket – switching inertial frames halfway through – the guy on earth will be older when his twin returns because time 'passed slower' in the rocket, if you will. That's sort of an oversimplification, but what you need to know is that if instead of the rocket accelerating two different directions, the *earth* does. That's kind of what I did with my [spacetime flux] bubbles."

The particulars of the spacetime flux bubbles require several whiteboards of equations to explain, but the end result is that the person in the bubble experiences an hour and three minutes while the rest of the world experiences only an hour. This may not seem significant, but over a 24 hour day, this adds up to over an hour of extra work time. "Think of it!" boomed Neder-Schrüje, "that is equivalent to at least one extra class per day, not to mention the homework time freed up on weekends. I plan to have all the full-time students in these bubbles by the fall 2009 semester. I expect in a year or two we can even phase out winter and summer break, given how much extra time we are giving these students. They have no idea how lucky they are!"

Advancements in scouting and success at school

Mike Stone
Eagle Scout

Everyone's doing it. Scouting for both boys and girls is addicting America's youth faster than crack, Hooked on Phonics, and the McRib combined. It is the second largest activity undertaken by Americans under 18, second only to the other popular activity: prison. It has consistently increased its membership by 23% every year for the last ten years according to the stat I just made up.

Why is everyone joining? Is it the knots? Is it the camping? Is it the strange encounters with a camp counselor in the equipment closet? No - it's the resume builder potential. Two identical candidates apply for a job. One is a guy and one is a girl. Who do they hire? They hire the guy, because he was an Eagle Scout, the company softball team needs a new shortstop, and he looks better in a dress. It is like an analog player in a digital age. It is like other similes that I can't even think of.

How does scouting help? The real question is how *doesn't* scouting help? (Of course, the answer would be: in no way does it not help, but I'm guessing you knew that given that the media isn't biased). Scouting helps in every way possible and it is even showing its mark right here at the Colorado School of Mines.

Sophomore Kenny Loggins successfully navigated his way to his professor's office in Chauvenet Hall last week with nothing more than a map and a compass. "It was just luck I guess. I put Red in the Shed and pointed to Fred," explained Loggins. Chauvenet Hall, infamous for its endless hallways, sudden dead ends, and false staircases has claimed more lives than Everest, but is still a key part of preparing students for the real world.

Last month, Junior Joanie Mitchell got locked in CO209 for the night and using her survival skills learned in scouting, made camp and started a fire using only a Bunsen Burner. "I could have died in there, but thanks to a cool head and a Chemistry demonstration earlier in the day, I lived through the night," confessed Mitchell. Yet again, scouting helps at Mines, but how does it help on an everyday basis for every student?

Given that super-awesome transition, let's talk about scouting and students on an everyday basis. Freshmen Earl Haggard said, "I use my skills from scouting everyday here. I rappel out my window to go to class, I used my citizenship in the community merit badge to secure my spot on the student senate, and I burn books I check out from the library as wood. I'm not a Nazi, I just think the residence halls are way too cold!" As Haggard was being arrested for a string of arson fires around school he also noted, "I'll also be able to escape from these handcuffs given my lock-picking merit badge."

Scouting offers so many opportunities for its young members that it is surprising more don't join or stay in it to get their Gold Awards or Eagle Scout Rank. If you are reading this and were in scouting, but didn't get your Eagle Rank or Gold Award, you're a quitter. Only quitters quit and you're a quitter. Do us all a favor and slap yourself right now. If you're in class, do me a personal favor and make the slap audible to those around you. Throw out a "whoa" while you're doing it too. It helps.

Eagle scouts have made their way to the Presidency of the United States, space as an astronaut for NASA, and the Arby's down the street from my house. You win some, you lose some. Scouting at Mines continues to make its impact on the students and faculty around them.

Shanahan to coach Mines football team

Tim Weilert
Resident Football Expert

In a move that surprised even the most veteran sports columnists and league watchers, former Denver Broncos coach Mike Shanahan announced that he had found a new job coaching Div. II football at CSM.

Shortly after losing his job as head coach of the Denver Broncos at the turn of the year, Shanahan's problems appeared to multiply. Once his job was gone,

it was only a matter of time until he became homeless. He was found rummaging through the dumpsters behind the Slate Café. Fortunately for Shanahan, a few of the Mines Athletics directors were jogging by and happened upon the former Super Bowl winning coach.

In an official press release from Mines Athletics, "We couldn't just let him starve, but we didn't want to just be giving a handout. So we have decided to make Shanahan

the next Mines Football coach so he could earn his keep."

Shanahan, when asked about his goals for The Orediggers said, "I want to take this team to another Dixie Rotary Bowl, so that the band kids have to miss part of finals week again."

In addition to coaching, Shanahan will also be responsible for teaching PAGN-101 classes, completing Quant Lab, and learning how defense is supposed to work.

Words, feelings, and stuff

Cameron Frisby
Truth-seeking Reporter

A startling announcement came from Dr. Scoggins' office this past Wednesday - the entire LAIS department will be re-named.

Our dearest school president recently made a speech at a lunch time meeting to discuss diversity at Mines. After trying to pronounce LAIS quickly, Scoggins became tongue-tied and very angry. "What idiot decided to put two vowels right next to each other in the damn name? That makes it near impossible to say well."

His point is well taken. Not only do we have a goofy name for our liberal arts department, we are also ashamed of it. Conse-

quently, we all try to say it quickly and get confused. After a brief description by the Registrar of what LAIS actually does, Scoggins simply gave the department a name that fits: Words, Feelings,

Not only do we have a goofy name for our liberal arts department, we are also ashamed of it.

and Stuff (WFaS).

And all the students rejoiced.

True to my stirring reputation as a fair and balanced reporter, I went to see what the WFaS faculty thought about the rebranding of their department. Unfortunately, upon entering Stratton Hall's

conference room I was hit by the same wave of apathy and sleepiness that usually accompanies every Human Systems lecture.

Overcome with the need to nap, I failed to start my microphone and only woke up when the janitor angrily told me to leave because he needed to close the building. The only thing that I remember from the entire conference was that the chairs in Stratton have horrible back support.

The new name, pronounced *WaFas*, has proven popular with students. Those interviewed seem to finally understand what they are meant to be learning in classes such as NHV. Long live the WFaS department, not to be confused with the Waffles department.

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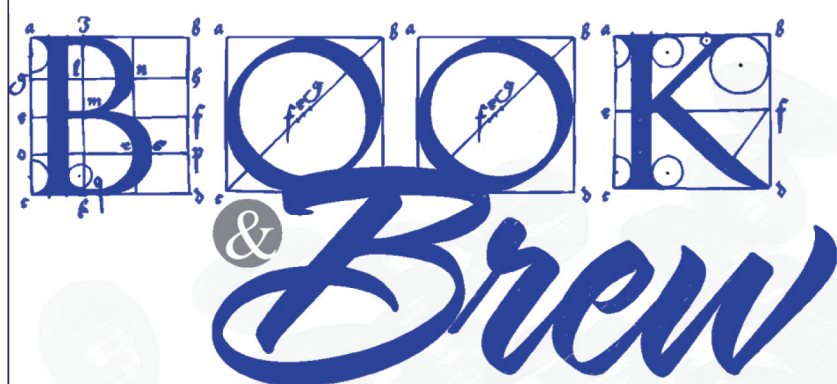
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